CROCODYLIAN DISTRIBUTION AND HABITAT USE IN WESTERN SARAWAK

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Research was conducted within four river systems in western Sarawak, to identify and relate subaquatic habitat types to the distribution and abundance of two crocodylian species, *Crocodylus porosus* and *Tomistoma schlegelii*. Through the use of side-scan sonar, this study was able to peer into some of these turbid and mysterious riverways, providing some of the first glimpses into what exactly is beneath the waterline.

This study utilised eyeshine surveys, captures and sonar mapping to acquire data necessary to fulfill its research objectives. The results include outputs for density and distribution patterns for crocodiles in targeted rivers of western Sarawak, comprehensive sonar mosaics detailing river profiles and GIS habitat maps useful for categorizing and quantifying subaquatic habitat types in Sarawak. This research sets the foundation for long-term research and monitoring effort for the crocodylians in Sarawak.

In total, 62 crocodylians were captured, measured and weighed during this study, with genetic samples collected for next generation DNA sequencing in partnership with Sarawak Forestry Department and the Northern Territory Government in Australia. Over 673 crocodylians were surveyed during crocodylian eyeshine surveys, providing new insights into the population structure, densities and spatial patterns of crocodylians at study sites. Side-scan sonar mosaics yielded over 3,827 km^2 of georeferenced subaquatic habitat maps, useful for understanding habitat types and coverage areas of habitat within rivers of Sarawak. Alongside crocodylians eyeshine data, these maps have painted the first picture of subaquatic habitat associations for crocodylians in Sarawak.

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Boat survey crew during crocodylian release effort.

Juvenile Saltwater Crocodile (*Crocodylus porosus*).